



## **WATER MANAGEMENT MONTHLY REPORT**

### **Information Exchange Bulletin**

**Vol. No. 03 – 11**

**Date: 1 December 2003**

Prepared by: U.S. Army Engineer Division,  
Great Lakes and Ohio River, PO Box 1159,  
Cincinnati, OH 45201-1159

### **RESERVOIR OPERATION AND SYSTEM STATUS FOR NOVEMBER 2003**

**HIGHLIGHTS** – Cairo stage began the month at 17.4 feet and ended at 36.2 feet and was cresting. Flood stage is 40.0 feet. The majority of the reservoirs are been drawn to winter pool, but excess rainfall has necessitated the use of some flood control storage this month.

**WEATHER** –The weather during November was warm and wet. Temperatures averaged 3 and 4 degrees above normal for the month throughout the basin. The final week of the month finally had some below normal temperatures. Precipitation was generally well above normal. West Virginia was particularly wet. Most of the state had twice its normal rainfall with up to three times normal in the west and central areas of the state. Western Tennessee was the driest area of the basin with near normal rainfall.

### **TEMPERATURE AND PRECIPITATION – NOVEMBER 2003**

	TEMPERATURE		PRECIPITATION	
STATION	OBSERVED DEGREES F	DEPARTURE FROM NORMAL	OBSERVED INCHES	DEPARTURE FROM NORMAL
Pittsburgh, PA	46.0	+3.7	3.42	+0.40
Charleston, WV	49.7	+3.8	9.12	+5.46
Columbus, OH	47.2	+3.5	2.89	-0.30
Cincinnati, OH	48.0	+3.3	3.92	+0.46
Louisville, KY	50.7	+3.1	5.69	+1.88
Indianapolis, IN	47.3	+4.4	3.64	+0.03
Evansville, IN	50.2	+4.3	4.36	+0.18
Nashville, TN	53.5	+4.2	4.17	-0.28

**STREAMFLOW** -- Ohio River monthly average flows for November ranged from a low of 240 percent of normal at Paducah, KY to a high of 382 percent of normal at Louisville, KY. Daily flows ranged from a low of 104 percent of normal at Paducah, KY to a high of 884 percent of normal at Pittsburgh, PA.

The following table presents the flow data summary for November at the Ohio River Index Stations:

**FLOW DATA – NOVEMBER 2003**

STATION	AVERAGE MONTHLY FLOW	PERCENT LONG-TERM NORMAL		
		MONTHLY	DAILY	
	CUBIC FEET/SECOND		HIGH	LOW
Pittsburgh, PA	68,600	311	884	128
Huntington, WV	165,000	371	883	148
Cincinnati, OH	197,000	368	757	123
Louisville, KY	225,000	382	704	141
Evansville, IN	230,000	342	620	116
Paducah, KY	332,000	240	423	104

**RESERVOIRS** -- November started with 2.9% utilization of the total system flood control storage and ended the month at 5.7%. System-wide augmentation storage started at 94.0% at the beginning of the month and was at 98.4% by the end of the month. Significant flood storage utilization in excess of 25 occurred at the following projects: Mahoning Creek, Conemaugh, Loyalhanna, Burnsville, Bluestone, Summersville, Sutton, R. D. Bailey, Beech Fork and Yatesville.

The following table depicts storage change by tributary reservoir subsystem for November:

CHANGE IN STORAGE TRIBUTARY-RESERVOIR SUBSYSTEM	(ACRE-FEET)
Allegheny-Monongahela-Beaver	-42,700
Muskingum-Little Kanawha-Hocking-Kanawha-Guyandotte	-81,200
Twelvepole-Big Sandy-Little Sandy-Scioto	-22,000
Little Miami-Licking-Mill Creek-Great Miami	+7,100

Kentucky-Salt-Green-Wabash	-53,100
Cumberland	+339,600
<b>TOTAL</b>	<b>+147,700</b>

LYN C. RICHARDSON, P.E.  
Chief, Technical Engineering & Construction Div.